USDA Forest Service
Rocky Mountain Region

Recovery Efforts in Response to Spruce Beetle Activity in Southern Colorado

The spruce beetle outbreak that is affecting many of the mature spruce forests in southern Colorado is a natural event that will change the appearance of the forest for some time to come. Spruce beetle and spruce trees have evolved together. The primary disturbance agent for high elevation mature spruce trees is spruce beetle. This relationship results in the death of old stands and the initiation of new stands. While these large disturbance events result in the death of large numbers of trees over vast areas, the removal of the old stands paves the way for new trees in a continual process of succession. In a similar manner, these large disturbances catalyze management activities in an effort to restore forested areas and maintain resiliency within the system. Forest Service response to the spruce beetle outbreak has been rapid, and utilizes many management tools. Some examples of Forest Service responses include:

Campgrounds on the San Juan National Forest – West Fork, East Fork and Williams Creek Campgrounds

In the spruce forests of southern Colorado, bark beetle activity became apparent as early as 2005. A large portion of the outbreak was initiated in patches of windthrown spruce in the Weminuche Wilderness which is located in the north-central portion of the San Juan National Forest. As the beetle populations have spread across the landscape in the ensuing period of time, popular campgrounds on

Removal of dead and infested spruce trees in the Big Meadows Campground is the first step in restoration of this popular campground on the Rio Grande NF.

the southern edge of the Wilderness Area have been subjected to heavy mortality. In some of these campgrounds a program of proactive thinning took place with the goal of reducing beetle impact. While some of the residual trees have been lost to beetle attack, a significant number of mature spruce have been retained. The combination of thinning and sanitation logging has resulted in mixed stands of scattered older trees combined with patches of younger regeneration that has already responded to the increased sunlight. These diverse stands should provide some measure of resilience to other natural events for years to come in these high use areas.

San Juan NF contact: Mr. Steve Hartvigsen – Pagosa Ranger District

Big Meadows Campground on the Rio Grande National Forest

As the outbreak has spread east from the Weminuche Wilderness Area, portions of the Rio Grande National Forest have experienced high degrees of spruce mortality as the beetle moved through very susceptible stands. On the Divide Ranger District spruce beetle killed over 95% of the mature spruce within several drainages. One of these heavily impacted drainages contained a popular recreation area: Big Meadows Campground which adjoined Big Meadows Reservoir. The large campground hosted many fishermen throughout the summer months, but dead trees resulting from beetle activity posed a hazard to visitors and had to be closed due to safety concerns. In a cooperative effort involving the Rocky Mountain Region Forest Health protection staff, and recreation and timber staff from the Rio Grande NF, during the summer of 2012 a salvage logging operation was conducted that resulted in the removal of the dead overstory. The funds resulting from the timber sale have supported efforts to rehabilitate the campground. Repairs to infrastructure, as well as the planting of new trees will allow this popular site to reopen in the summer of 2013.

Rio Grande NF contact: Mr. Kirby Self – Divide Ranger District

Eggleston Lake on the Grand Mesa National Forest

Foresters have been aware of an increasing spruce beetle population on the Grand Mesa since the mid-2000's. A wind event near the popular Eggleston Lake area occurred in October of 2010 resulting in the blowdown of 200 acres of mature spruce. The large number of blown down trees represented a significant food source for the spruce beetle, and could allow the outbreak to increase rapidly in scale and intensity. Removal of the downed host material was a priority for the timber staff of the Grand Valley Ranger District, and management activities were facilitated by the relatively easy access to the affected stands. A sanitation timber sale package was rapidly assembled by Forest Service personnel, and almost all of the downed material had been removed by the winter of 2012/13. Removal of the downed spruce not only reduced the potential for the beetle outbreak, but funding obtained through the salvage timber sale will support replanting of these stands and help with the restoration of the forest.